

2021 PROVINCIAL SKILLS CANADA COMPETITION



Contest Description

Red Deer College

May 1 & May 2, 2021

EVENT: Sprinkler Systems Installer	LEVEL: Post -Secondary																						
DURATION: 12 hours (two days)	LOCATION: RED DEER COLLEGE																						
<p>COMPETITION FORMAT: (VIRTUAL, AT A POST-SECONDARY INSTITUTION) Competitors will compete individually, in person, from their local Post-Secondary Institution. Location specific COVID-19 protocols must be followed. Post-Secondary Institutions and competitors will need to work together to ensure the competitor is ready for success on their competition day. They will need to prepare their competition space with all of the required tools, equipment, materials, and technology (as listed below) that will be needed to complete the competition. This competition will be closed to the public. Only registered competitors and assigned Provincial Technical Committee members will be allowed to attend.</p>																							
<p>COMPETITION SCHEDULE:</p> <table border="0"> <tr> <td>May 1:</td> <td>May 2:</td> </tr> <tr> <td> <table border="1"> <tr> <td><i>ORIENTATION/ COMPETITION</i></td> <td>7:30AM</td> </tr> <tr> <td>BREAK</td> <td>9:30AM – 9:45AM</td> </tr> <tr> <td>LUNCH</td> <td>12:00PM – 1:00PM</td> </tr> <tr> <td>BREAK</td> <td>2:30PM – 2:45PM</td> </tr> <tr> <td>COMPETITION</td> <td>2:45PM - 4:00PM</td> </tr> </table> </td> <td> <table border="1"> <tr> <td><i>ORIENTATION/ COMPETITION</i></td> <td>8:00AM</td> </tr> <tr> <td>BREAK</td> <td>9:30AM – 9:45AM</td> </tr> <tr> <td>LUNCH</td> <td>12:00PM - 1:00PM</td> </tr> <tr> <td>COMPETITION</td> <td>2:30PM - 2:45PM</td> </tr> </table> </td> </tr> </table>		May 1:	May 2:	<table border="1"> <tr> <td><i>ORIENTATION/ COMPETITION</i></td> <td>7:30AM</td> </tr> <tr> <td>BREAK</td> <td>9:30AM – 9:45AM</td> </tr> <tr> <td>LUNCH</td> <td>12:00PM – 1:00PM</td> </tr> <tr> <td>BREAK</td> <td>2:30PM – 2:45PM</td> </tr> <tr> <td>COMPETITION</td> <td>2:45PM - 4:00PM</td> </tr> </table>	<i>ORIENTATION/ COMPETITION</i>	7:30AM	BREAK	9:30AM – 9:45AM	LUNCH	12:00PM – 1:00PM	BREAK	2:30PM – 2:45PM	COMPETITION	2:45PM - 4:00PM	<table border="1"> <tr> <td><i>ORIENTATION/ COMPETITION</i></td> <td>8:00AM</td> </tr> <tr> <td>BREAK</td> <td>9:30AM – 9:45AM</td> </tr> <tr> <td>LUNCH</td> <td>12:00PM - 1:00PM</td> </tr> <tr> <td>COMPETITION</td> <td>2:30PM - 2:45PM</td> </tr> </table>	<i>ORIENTATION/ COMPETITION</i>	8:00AM	BREAK	9:30AM – 9:45AM	LUNCH	12:00PM - 1:00PM	COMPETITION	2:30PM - 2:45PM
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<p>SAFETY: The health, safety, and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.</p> <p>Safety Checklist: It is the responsibility of each competitor and teacher to review the Safety Checklist (https://skillsalberta.com/additional-2021-competition-resources/) in advance of the competition and ensure they are able to meet all safety requirements. During the orientation, the safety checklist will be formally reviewed.</p>																							

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AWARDS CEREMONY INFORMATION: Please join us for a live virtual awards ceremony on May 13th at 6:30PM.

Please note: This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in yellow

CONTEST INTRODUCTION

Purpose of the Challenge:

To assess the contestant's knowledge and skills in the fabrication and installation of a fire sprinkler system and components with high regard to the aspects of quality of workmanship proficiency of piping/system component installation and accuracy of work within a specified time frame.

Skills and Knowledge to be tested:

- Applying mathematical concepts involving planning, measuring, layout, and installation of a piping system.
- Interpretation and application of blueprint specifications.
- Assembling and fabricating a piping system
 - o measure, cut, and fabricate steel pipe and fittings
 - o use tools & equipment to join pipe, fittings, and system components
 - o applying safe work practices and strong positive work ethic

CONTEST DESCRIPTION

This year's competition will be a two part competition which will demonstrate the necessary skills required in the Sprinkler trade.

Day 1

The Sprinkler Systems Installer apprentice will be required to create a residential sprinkler valve tree which will feed a CPVC piping arrangement that feeds three of the main sprinkler heads (sidewall, concealed pendent and a two piece semi recessed pendent). Along with that the apprentice will be required to install 3 electrical devices that would connect to a sprinkler system, the wiring of these devices is not required because of the trade cross over. The residential mock-up is what would be commonly found in a house that is fully fire sprinklered. This project will measure the apprentice's ability to read and interpret a blue print, measure,

Last Updated April 13, 2021

2021 PROVINCIAL SKILLS CANADA COMPETITION



cut, thread, groove and solvent weld, steel and CPVC pipe according to the drawing provided. The apprentice will also demonstrate their ability to cut through wood to install sprinkler piping and fire protection devices.

Day 2

The Sprinkler Systems Installer apprentices will be required to create and 45 degree parallel equal spread offset project. This project will utilize the four main piping system a Sprinkler Systems Installer would see in the field, threaded steel, grooved steel, CPVC and copper. The apprentice will required to use a ridged 300 to thread and groove the steel pipe, they will be required to solder the copper pipe and finally they will be required to solvent weld the CPVC pipe.

Tasks that may be performed during the contest

- Applying mathematical concepts involving offsets.
- Interpreting and applying the blueprint specifications
- Assembly of various pipe and fitting systems
 - Carbon steel threaded / bolted
 - Pipe Fabrication
 - CPVC solvent
 - Copper soldering
- Apply safe work practices
- All dimensions will be taken from the designated centerline or benchmarks unless directed otherwise
- Tool inspection proper to event or the evening before competition
- There will not be any onsite pipe joinery technique instruction
- Proper insertion for all pipe joint is mandatory
- It is to be understood that throughout the competition, safety and project judging will be ongoing
- No project specific aids, tools allowed
- Dimensions may be modified before competition

2021 PROVINCIAL SKILLS CANADA COMPETITION



EQUIPMENT, MATERIAL, CLOTHING

Equipment and Material Provided by the Committee/Institution:

Teflon Tape	Pipe threading machine	Roll groovers
Paint markers	Pipe cutters	1" – 2" die head
Pencil/paper/calculator	Master Pro-Dope, Brush	Face Mask and Face Shield
Crescent wrench	Ratchet / Impact - Sockets	Drill
Hole Saw Kit	Hacksaw	Tape Measure
Screwdriver - Bits	Level	Head Wrench
Reciprocating Saw	B Tank – Soldering Kit	Reamers

Note: No other tools than the tools listed above will be allowed into competition area.

Equipment and Materials Provided By the Competitor

No equipment and material will be provided by the competitor. Required clothing (Provided by competitor)

- Coveralls / overalls allowed if sleeves used
- No jewellery
- Long hair must be tied back and concealed
- No cell phones or electronic devices allowed

SAFETY REQUIREMENTS

List of required personal protective equipment (PPE) provided by competitor

- Safety glasses
- CSA approved safety shoes
- Nitrile-coated gloves
- Hearing protection
- Hard hat
- Gloves

2021 PROVINCIAL SKILLS CANADA COMPETITION



ASSESSMENT

Point breakdown

POINT BREAKDOWN	/100
Installation/Fabrication Efficiency	15
Accuracy of Equipment Installation	15
Accuracy of Measurements	15
Appearance/Quality	15
Use of Tools	10
Testing and Inspection	15
Safety	15

Tie (No ties are allowed)

In the event of a tie, the competitor with the highest score in the safety criteria will be declared the winner.

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

Post-Secondary Competitor Information is [available here](#).

Lunch

Lunch will be provided by Skills Canada Alberta

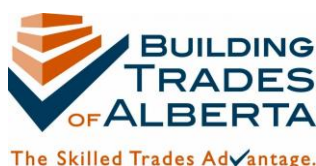
Team Alberta Information

Team Alberta will be selected from competition Gold medalists who will then be eligible to participate at the Skills Canada National Competition (SCNC) in a virtual format May 25-30, 2021. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillsCanada.com/>.

Ethical Conduct

We recognize that participants will be competing individually in their own unique environments. We expect all competitors to compete fairly, respecting and abiding by the established rules in the true spirit of Skills Canada Alberta.

Last Updated April 13, 2021



2021 PROVINCIAL SKILLS CANADA COMPETITION



Letter of Participation

Competitors who participate in the 2021 Provincial Skills Canada Competition are eligible for a Letter of Participation by request by contacting katherinek@skillsalberta.com.

COMMITTEE MEMBERS

Graham Dewar	Emil Ohler	Steve Bower
Chris McCloskey	Rob Russell	Mike Kastern